

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/111388 A1

(51) International Patent Classification⁷: **E21B 47/10,**
G01V 1/50

LT, MA, ML, MR, NE, NL, OM, SD, SN, TD, TG, TN, TR,
TT, US, VN): SCHLUMBERGER TECHNOLOGY B.V.
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(21) International Application Number:
PCT/EP2004/005079

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(22) International Filing Date: 12 May 2004 (12.05.2004)

(25) Filing Language: English

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(26) Publication Language: English

(30) Priority Data:
03291350.1 6 June 2003 (06.06.2003) EP

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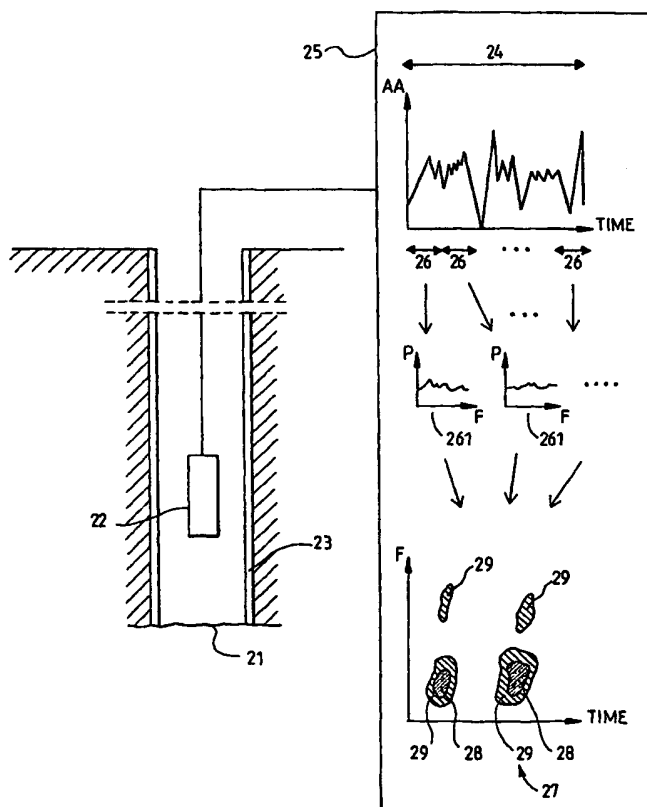
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR ACOUSTIC DETECTION OF A FLUID LEAK BEHIND A CASING OF A BOREHOLE



(57) Abstract: An acoustic detection of a discrete acoustic signal allows to detect a leak behind a casing (23) of a borehole. An acoustic amplitude (AA) is sampled during a recording time period (24 ; 64) at a determined position along the tube. Time intervals (26 ; 66) are defined inside of the recording time period (24), and for each time interval (26) the measured acoustic amplitudes are processed to obtain respectively a corresponding power-frequency spectrum (261). A plurality of the power-frequency spectra are analyzed to identify the discrete acoustic signal by detecting time and frequency dependant changes of power. Preferably the processing involves a Fourier transform analysis. A power-frequency time plot is used to conveniently identify the discrete acoustic event.



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- (81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.